

High eta HCal tile testing

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High eta HCal tile inventory and status

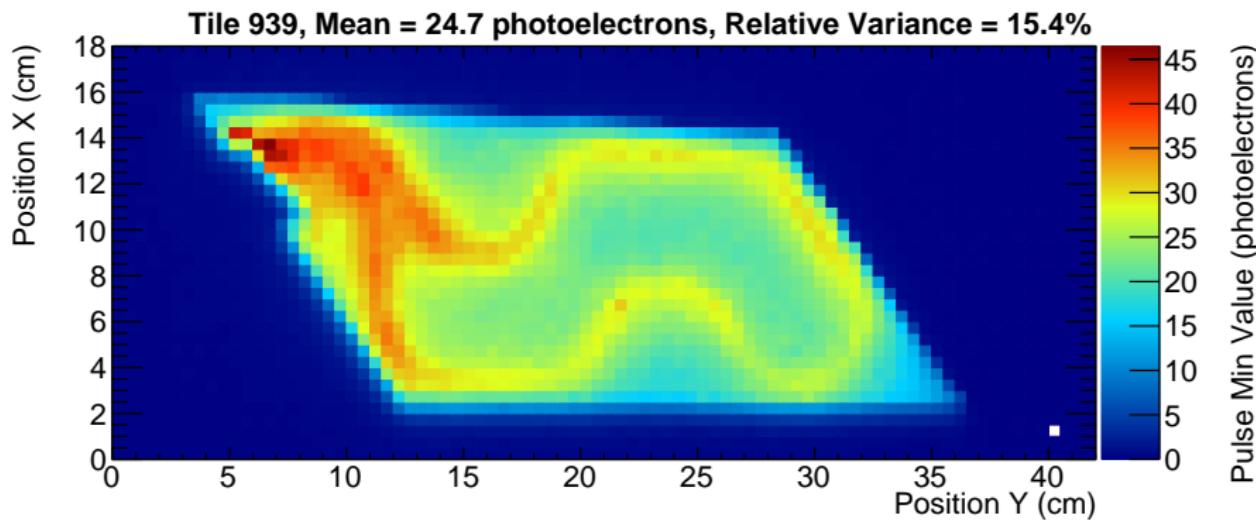
SiPM number	Tile number	inner/outer	OK/FAIL	CU tag(s)
945	116.092.0197	outer	FAIL	20170413-1352, 20170414-1328
956	113.029.0131	outer	OK	
976	115.054.0159	outer	OK	
990	114.044.0149	outer	OK	
939		inner		20170428-1400
955		inner		20170430-1100
964	105.017.0097	inner	OK	20170430-2227
965		inner		20170421-1522

A few questions:

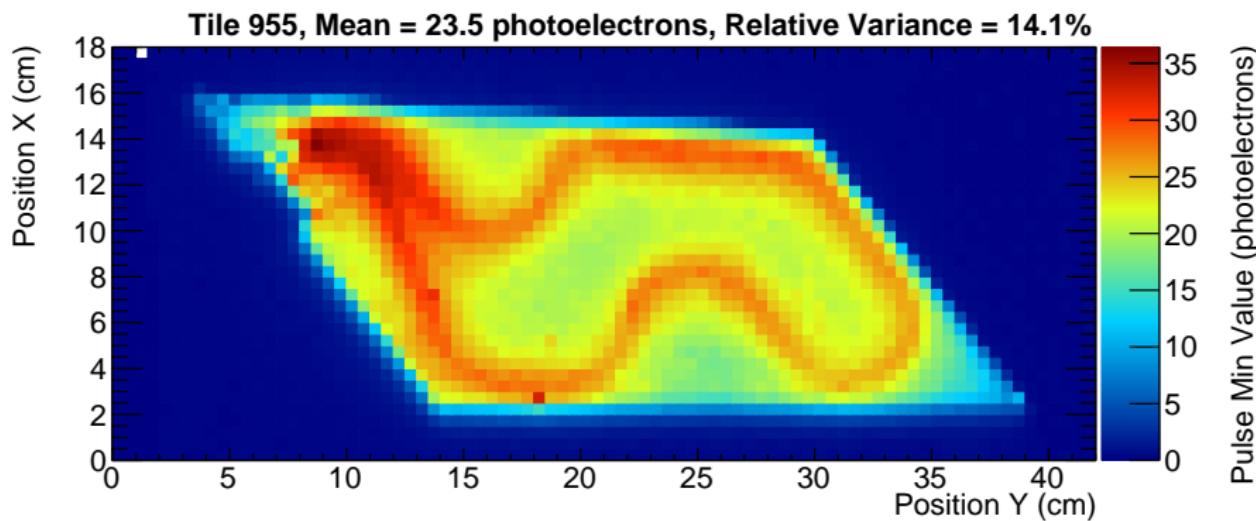
- Is there some way for us to get the tile inventory numbers for the other three inner tiles?
- Is the first number the model/type number?
- Can we get the mechanical drawings for all these?

Inner HCal tiles

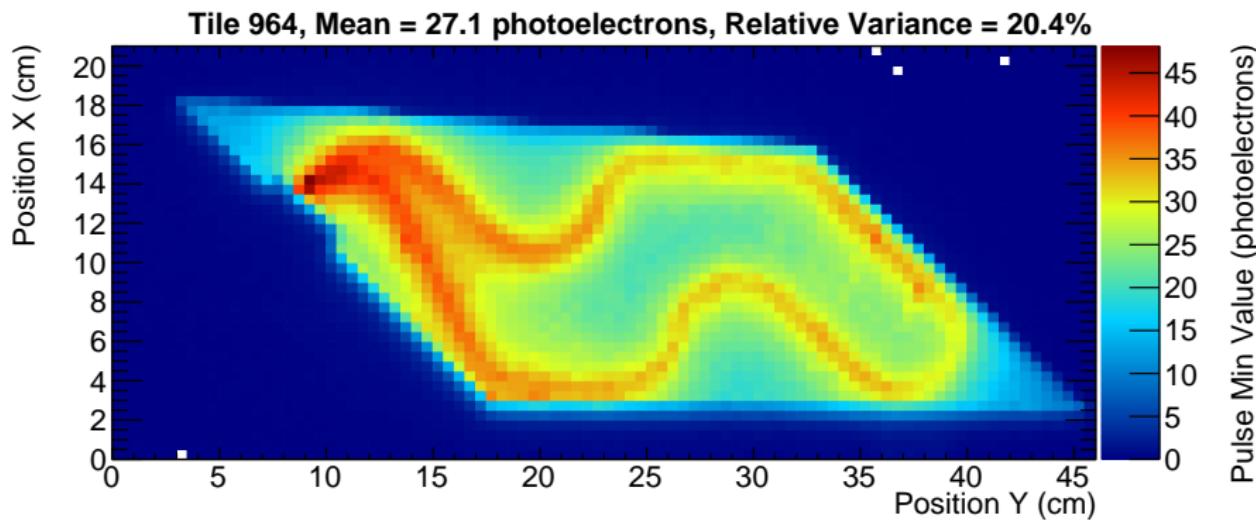
Inner HCal Tile Scan—939



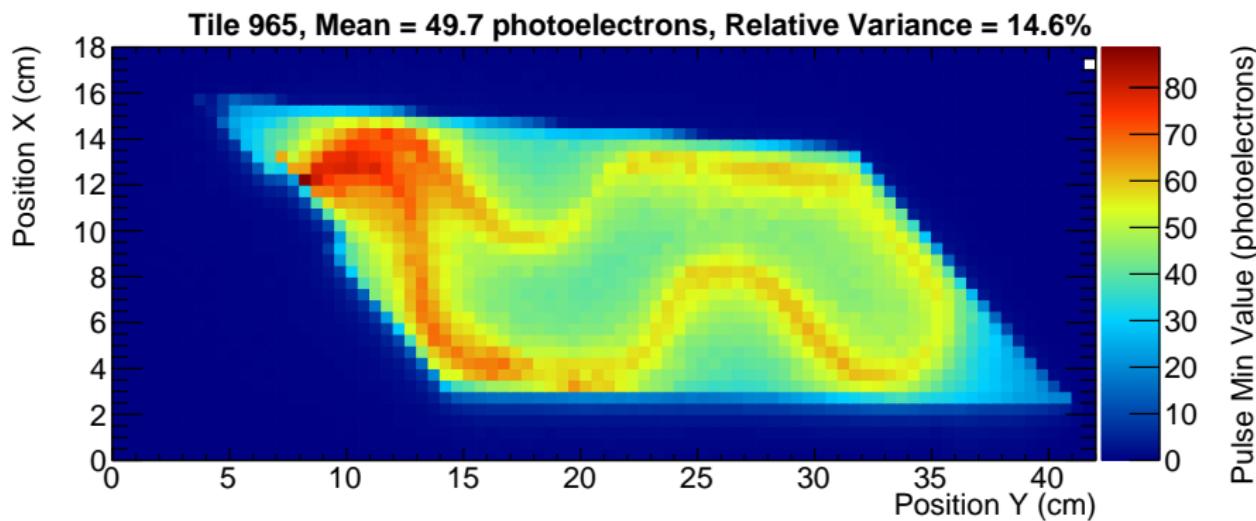
Inner HCal Tile Scan—955



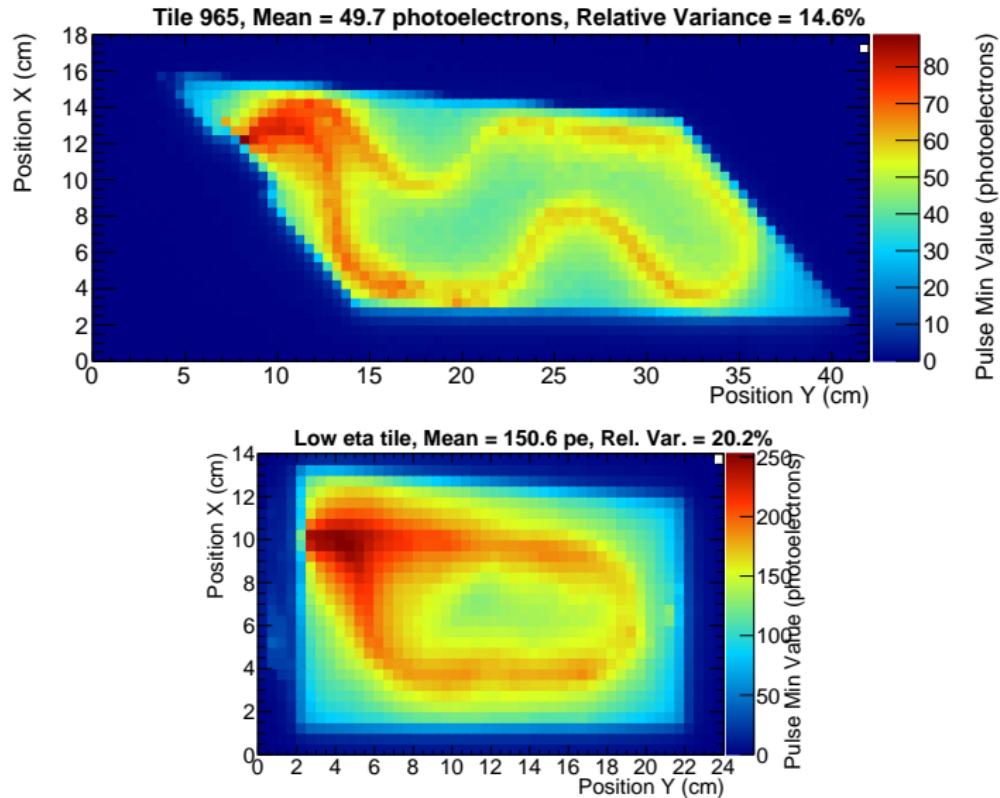
Inner HCal Tile Scan—964



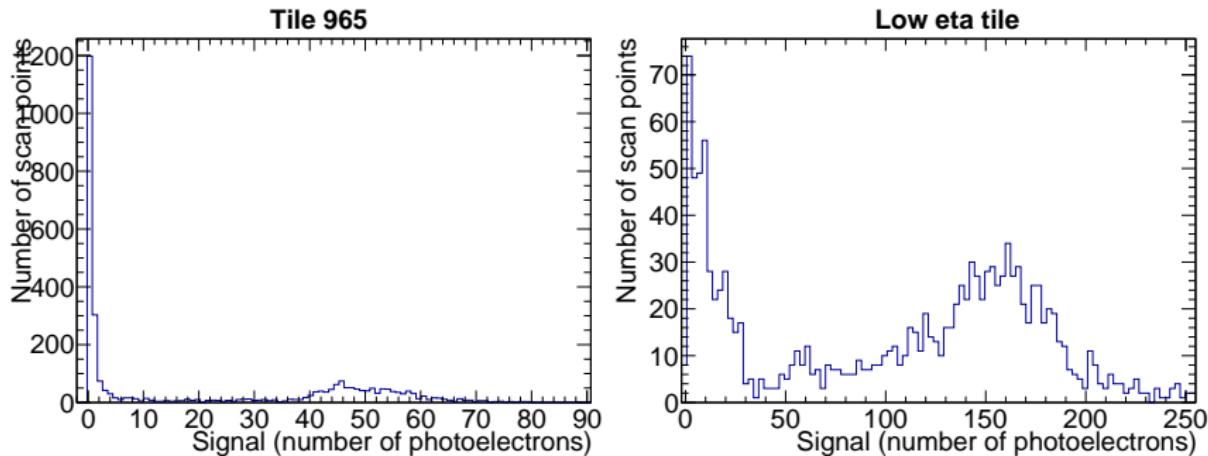
Inner HCal Tile Scan—965



Comparing one of the high eta ones with one of the low eta ones

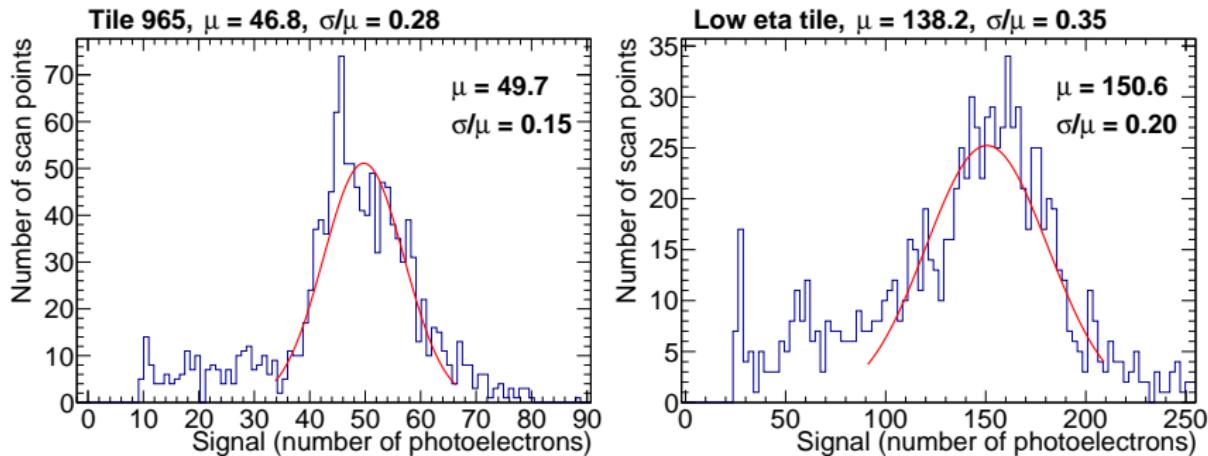


Procedure for estimating the relative variation



- The off-panel background needs to be subtracted
- No perfect procedure
- We cut out anything below 10% of the max value

Procedure for estimating the relative variation



- Get Mean and RMS of remainder OR do a Gaussian fit over the main region
- High region is cladding light near SiPM
- Low region could be background, edges, regions far from fiber, etc

- Inner tiles all look fine and have good response uniformity (relative variation of 15–20%)
- Outer tile results coming soon (working through a few minor setbacks)
- Is the tile response uniformity something that might be a KPP? We can consider ways to further improve our methods for assessing the tile uniformity